AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

Claims 1-24 are canceled

25. (new): A rod-type solid-state laser system in which, by means of a relay lens and a coupling lens, a laser beam emitted from a symmetric stable optical resonator consisting of a rod-type solid-state laser medium, a partially reflecting mirror, and a totally reflecting mirror is made to enter an optical fiber, a first reference plane is set at an arbitrarily position between the endface, of the rod-type solid-state laser medium arranged close to the partially reflecting mirror, that opposes the partially reflecting mirror and the middle point of the rod-type solid-state laser medium, a second reference plane is set at a position that is optically symmetric with the first reference plane, with respect to the partially reflecting mirror, the relay lens is arranged at a position at which the relay lens transfers the first reference plane onto a first image plane and transfers the second reference plane onto the coupling lens, and the coupling lens is arranged at a position at which the coupling lens transfers the first image plane onto the endface of the optical fiber.

26. (new): The rod-type solid-state laser system according to claim 25, wherein a thin-wall lens is assumed that is optically equivalent to a thermal lens formed at a position between the endface, of the rod-type solid-state laser medium arranged close to the partially reflecting mirror, that opposes the partially reflecting mirror and the middle point of the rod-type solid-

state laser medium, and the first reference plane is set at the position of the main plane of the assumed thin-wall lens.

27. (new): The rod-type solid-state laser system according to claim 25, wherein the first reference plane is set on the endface, of the rod-type solid-state laser medium arranged close to the partially reflecting mirror, that opposes the partially reflecting mirror.

28. (new): The rod-type solid-state laser system according to claim 25, wherein an aperture is arranged at the position of the second reference plane.

29. (new): The rod-type solid-state laser system according to claim 28, wherein the opening diameter of the aperture is approximately the same as the diameter of the rod-type solid-state laser medium.

30. (new): The rod-type solid-state laser system according to claim 25, wherein the rod-type solid-state laser medium is singular.

31. (new): The rod-type solid-state laser system according to claim 25, comprising at least one more rod-type solid-state laser media.

32. (new): A rod-type solid-state laser system in which, by means of a relay lens and a coupling lens, a laser beam emitted from a symmetric stable optical resonator consisting of a rod-type solid-state laser medium, a totally reflecting mirror, a partially reflecting mirror formed of a plane mirror, and a is made to enter an optical fiber, wherein a first reference plane is set at a position, between the partially reflecting mirror and the middle point of the rod-type solid-state laser medium arranged close to the partially reflecting mirror, at which the diameter of a laser beam is constant, regardless of the condition of the thermal lens of the rod-type solid-state laser medium, a second reference plane is set at a position that is optically symmetric with the first

reference plane, with respect to the partially reflecting mirror, the relay lens is arranged at a position at which the relay lens transfers the first reference plane onto a first image plane and transfers the second reference plane onto the coupling lens, and the coupling lens is arranged at a position at which the coupling lens transfers the first image plane onto the endface of the optical fiber.

33. (new): The rod-type solid-state laser system according to claim 32, wherein an internal aperture for limiting the diameter of a laser beam is provided at a position between the rod-type solid-state laser medium and the partially reflecting mirror, and the first reference plane is set at the position of the internal aperture.

34. (new): The rod-type solid-state laser system according to claim 32, wherein an internal aperture for limiting the diameter of a laser beam is provided at a position between the rod-type solid-state laser medium and the totally reflecting mirror, and the first reference plane is set at a position that, toward the rod-type solid-state laser medium, is apart from the partially reflecting mirror by the same distance as that between the internal aperture and the totally reflecting mirror.

35. (new): The rod-type solid-state laser system according to claim 32, wherein an aperture is arranged at the position of the second reference plane.

36. (new): The rod-type solid-state laser system according to claim 35, wherein the opening diameter of the aperture is approximately the same as the opening diameter of the internal aperture.

37. (new): The rod-type solid-state laser system according to claim 32, wherein the rod-type solid-state laser medium is singular.

38. (new): The rod-type solid-state laser system according to claim 32, comprising at least one more rod-type solid-state laser media.

39. (new): A rod-type solid-state laser system in which rod-type solid-state laser media are provided each spaced evenly apart from one another, a totally reflecting mirror formed of a plane mirror is arranged at a position that is apart from the outer endface of the rod-type solid-state laser medium arranged at an endmost position, by approximately half the distance by which the rod-type solid-state laser media are each spaced apart from one another, a partially reflecting mirror formed of a plane mirror is arranged at the approximately middle position between two arbitrary neighboring ones of the rod-type solid-state laser media, thereby configuring an optical resonator defined by the totally reflecting mirror and the partially reflecting mirror, a laser beam emitted from the optical resonator is amplified by the rod-type solid-state laser media, utilized as amplifiers, other than the rod-type solid-state laser medium utilized for the optical resonator, and by means of a relay lens and a coupling lens, the laser beam is made to enter an optical fiber, wherein a virtual partially reflecting mirror is assumed at a position that is apart from the emitting-side endface of the rod-type solid-state laser medium situated at the laser-beam emitting end, by approximately half the distance by which the rod-type solid-state laser media are each spaced apart from one another, a first reference plane is set at an arbitrary position between the endface, of the rod-type solid-state laser medium arranged close to the virtual partially reflecting mirror, that opposes the virtual partially reflecting mirror and the middle point of said rod-type solid-state laser medium, a second reference plane is set at a position that is optically symmetric with the first reference plane, with respect to the virtual partially reflecting mirror, the relay lens is arranged at a position at which the relay lens transfers the first reference plane onto a first

image plane and transfers the second reference plane onto the coupling lens, and the coupling lens is arranged at a position at which the coupling lens transfers the first image plane onto the endface of the optical fiber.

40. (new): The rod-type solid-state laser system according to claim 39, wherein a thin-wall lens is assumed that is optically equivalent to a thermal lens formed at a position between the endface of the rod-type solid-state laser medium arranged close to the virtual partially reflecting mirror, that opposes the virtual partially reflecting mirror and the middle point of said rod-type solid-state laser medium, and the first reference plane is set at the position of the main plane of the assumed thin-wall lens.

41. (new): The rod-type solid-state laser system according to claim 39, wherein the first reference plane is set on the endface, of the rod-type solid-state laser medium arranged close to the virtual partially reflecting mirror, that opposes the virtual partially reflecting mirror.

42. (new): The rod-type solid-state laser system according to claim 39, wherein an aperture is arranged at the position of the second reference plane.

43. (new): The rod-type solid-state laser system according to claim 42, wherein the opening diameter of the aperture is approximately the same as the diameter of the rod-type solid-state laser medium.

44. (new): A rod-type solid-state laser system in which rod-type solid-state laser media are provided each spaced evenly apart from one another, a totally reflecting mirror formed of a plane mirror is arranged at a position that is apart from the outer endface of the rod-type solid-state laser medium arranged at an endmost position, by approximately half the distance by which the rod-type solid-state laser media are each spaced apart from one another, a partially reflecting

mirror formed of a plane mirror is arranged at the approximately middle position between two arbitrary neighboring ones of the rod-type solid-state laser media, thereby configuring an optical resonator defined by the totally reflecting mirror and the partially reflecting mirror, a laser beam emitted from the optical resonator is amplified by the rod-type solid-state laser media, utilized as amplifiers, other than the rod-type solid-state laser medium utilized for the optical resonator, and by means of a relay lens and a coupling lens, the laser beam is made to enter an optical fiber, wherein a virtual partially reflecting mirror is assumed at a position that is apart from the emitting-side endface of the rod-type solid-state laser medium situated at the laser-beam emitting end, by approximately half the distance by which the rod-type solid-state laser media are each spaced apart from one another, a first reference plane is set at a position, between the virtual partially reflecting mirror and the middle point of the rod-type solid-state laser medium arranged close to the virtual partially reflecting mirror, at which the diameter of a laser beam is constant, regardless of the condition of the thermal lens of the rod-type solid-state laser medium, a second reference plane is set at a position that is optically symmetric with the first reference plane, with respect to the virtual partially reflecting mirror, the relay lens is arranged at a position at which the relay lens transfers the first reference plane onto a first image plane and transfers the second reference plane onto the coupling lens, and the coupling lens is arranged at a position at which the coupling lens transfers the first image plane onto the endface of the optical fiber.

45. (new): The rod-type solid-state laser system according to claim 44, wherein an internal aperture for limiting the diameter of a laser beam is provided at a position between the rod-type solid-state laser medium, in the optical resonator, arranged close to the partially reflecting mirror and the partially reflecting mirror, and the first reference plane is set at a

position that, toward the rod-type solid-state laser medium, is apart from the virtual partially reflecting mirror by the same distance as that between the internal aperture and the partially reflecting mirror.

46. (new): The rod-type solid-state laser system according to claim 44, wherein an internal aperture for limiting the diameter of a laser beam is provided at a position between the rod-type solid-state laser medium, in the optical resonator, arranged close to the totally reflecting mirror and the totally reflecting mirror, and the first reference plane is set at a position that, toward the rod-type solid-state laser medium, is apart from the virtual partially reflecting mirror by the same distance as that between the internal aperture and the totally reflecting mirror.

47. (new): The rod-type solid-state laser system according to claim 44, wherein an aperture is arranged at the position of the second reference plane.

48. (new): The rod-type solid-state laser system according to claim 47, wherein the opening diameter of the aperture is approximately the same as the opening diameter of the internal aperture.